

Prepared for: \_\_\_\_\_

Prepared by: \_\_\_\_\_

Farm: \_\_\_\_\_ Tract: \_\_\_\_\_ Date: \_\_\_\_\_



Firebreaks are useful for forest management, access and recreation.

## DEFINITION

A firebreak is a strip of bare land or vegetation that retards fire.

## PURPOSE

Firebreaks are used to prevent the spread of wildfire and control prescribed burns.

## CRITERIA

Firebreaks may be temporary or permanent and consist of fire-resistant vegetation, non-flammable materials, or bare ground.

Firebreaks should be located on the contour where practical to minimize the risk of soil erosion.

Firebreak construction must comply with applicable federal, state, and local laws and regulations, including South Carolina's Best Management Practices (BMPs).

Constructed firebreaks should tie into existing physical barriers (without direct drainage into receiving waters) to prevent sedimentation.

## Types of Firebreaks

Four types of firebreaks are adaptable to the various needs and conditions existing in South Carolina. They are:

1. forest roads,
2. plowed, disked, or bladed firebreaks,
3. burned firebreaks, and
4. vegetated firebreaks.

Forest roads and plowed or disked breaks may be used in any forest type and on nearly all terrain conditions, provided location specifications are followed. Use of burned and vegetated breaks is generally restricted to pine forests in the Coastal Plain and on gentle slopes in the Piedmont.

## Forest Roads

Existing or newly constructed forest roads or trails can be effective firebreaks if properly maintained.

Construction techniques include the following:

- On steep grades where ditches are required, install culverts at specified intervals to remove surface runoff with minimal erosion.
- The maximum permissible sustained grade should be 10 percent. Short, steep slopes should be avoided.
- Proper drainage is essential to the stability of the road. Culverts or surface drains may be used.
- Surface drains are the most economical. They should be at about a 30 degree angle or less down-slope. Surface gutters or earthen water bars can be used to supplement breaks in grade. On flat terrain, drainage must

be to both sides and diverted from the roadbed at every opportunity. All drains, culverts, water turnouts, and broad-based dips should empty runoff onto undisturbed forest floor.

Road Grade %	Approx. distance needed between water breaks (feet)
2	245
5	125
10	80

- Seed constructed roadway with a cool-season grass or legume following specifications attached.
- Avoid road construction inside SMZs except where necessary to cross streams.

### **Plowed, Disked or Bladed Firebreaks**

These should be located:

- Parallel to public roads and railroads (high risk areas), adjacent or parallel to forest property boundaries, and within the forest where necessary.
- In the Piedmont and Mountains, they should be located on adapted main ridges and side ridges. They should follow the approximate contour of the land wherever feasible to minimize erosion.

Construction techniques include the following:

- Expose mineral soil with fireline plows, heavy bush and bog disks, or farm plows and disks or blades depending upon the terrain and character of vegetation to be removed.
- Firebreak width is a site-specific determination. The breaks should be the width of the disk, Mathis plow (3 to 5 feet), or blade (6 to 12 feet). These widths are usually sufficient to contain

most creeping or slowly moving ground fires, but will not stop crown fires.

- Temporary firebreaks must be plowed immediately before burning.

### **Burned Firebreaks**

These should be located:

- Parallel to public roads and railroads, adjacent or parallel to forest property boundaries, and within forests, where needed.

Construction techniques include the following:

- Two parallel strips, each 5 feet wide, and a minimum of 20 feet apart, should be plowed or disked.
- Logs, limbs, and other flammable materials which are likely to burn for several hours should be removed from the area between the strips.
- The South Carolina Forestry Commission must be notified on the day of the burn before burning is begun.
- The area between the strips should be burned on a calm, clear day according to SC Smoke Management Guidelines.

### **Vegetated Firebreaks**

Locations must protect the forest as well as provide convenient access to the enterprise.

Installation techniques include the following:

- Strips at least 30 feet wide adjoining forest land and 50 feet wide within forests should be cleared by removing trees and scrubby growth.
- Breaks must be 50 feet wide within the forest to allow sufficient sunlight for grass and legume plants to grow successfully and form a sod.
- The land should be prepared and seeded according to the attached table.

## Firebreak - Specifications Sheet

Landowner \_\_\_\_\_ Field Number \_\_\_\_\_

### Type of Firebreak

! Forest road	! Burned
! Plowed, disked or bladed	! Vegetated

### Layout, Dimensions, Construction Information

Construction must comply with all federal, state, and local laws.

Total Length (ft): \_\_\_\_\_ Average Width (ft.): \_\_\_\_\_ Total area (ac) or 1000Ft.<sup>2</sup> \_\_\_\_\_

Additional location and layout requirements: Location shown on plan map yes \_\_\_\_\_ no \_\_\_\_\_

Equipment to be used:

### Plant Materials Information (For vegetated firebreaks)

Species (Use cool season species only)	Seed Lbs./ac. or Lbs./1000Ft. <sup>2</sup>	Lime Lbs./ac. or Lbs./1000Ft. <sup>2</sup>	Fertilizer Lbs./ac. or Lbs. /1000Ft. <sup>2</sup>	Mulch Lbs./ac. or Lbs./1000Ft. <sup>2</sup>	Planting Dates
Erosion Control					
1.					
2.					
3.					
Wildlife					
1.					
2.					
3.					

### Site Preparation

### Planting Method (s)

Broadcast \_\_\_\_\_ Drilled \_\_\_\_\_

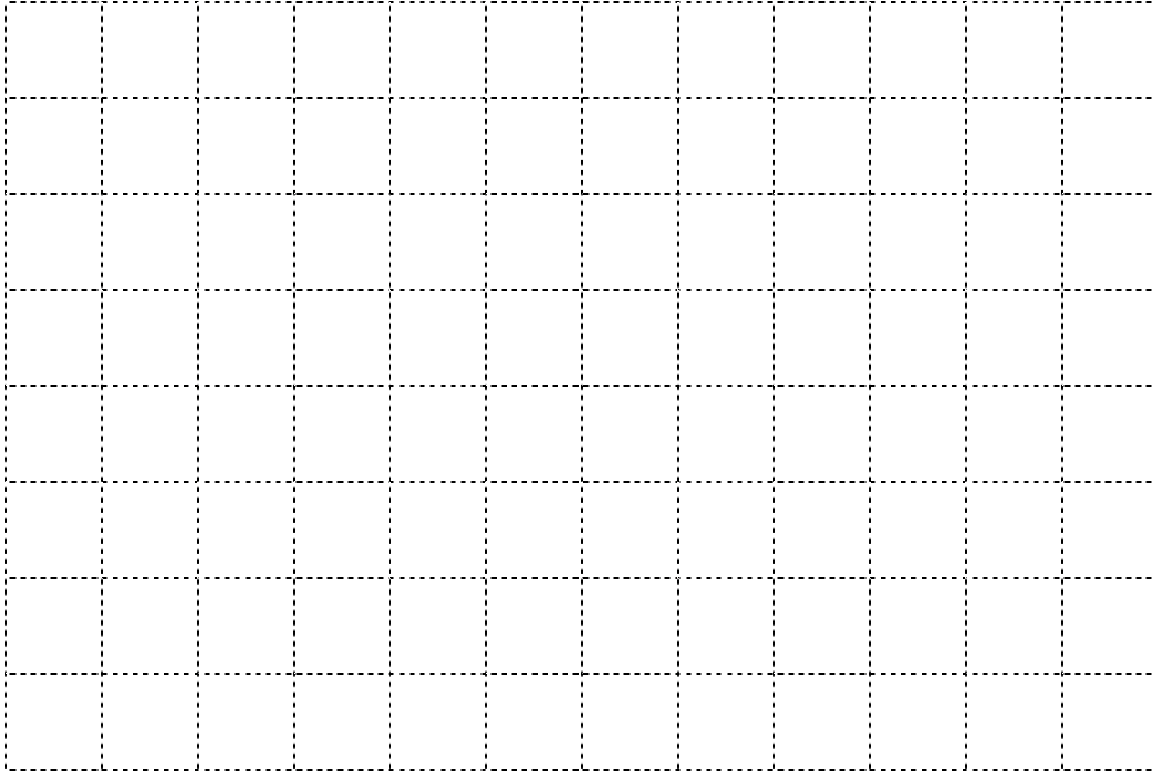
### Maintenance Requirements – Check as Appropriate

<input type="checkbox"/> Inspect annually, rework erosion control measures	<input type="checkbox"/> Clean and repair surface drains
<input type="checkbox"/> Control access by vehicles	<input type="checkbox"/> Rework bare ground breaks before fire season
<input type="checkbox"/> Stabilize unneeded bare ground firebreaks	<input type="checkbox"/> Apply lime, fertilizer, and seed
<input type="checkbox"/> Remove all woody materials	<input type="checkbox"/> Mow or graze to remove litter, weeds
<input type="checkbox"/> Burn or disk dead grass	

## Firebreak – Job Sketch

If needed, an aerial view or a side view of the firebreaks, including location of water control structures. A direction arrow and other relevant information and complementary practices may also be included.

Scale 1" = \_\_\_\_\_ ft. (NA indicates sketch not to scale: grid size ½" by ½")



Additional Specifications and Notes:

**This job sheet was prepared in cooperation with local Soil and Water Conservation Districts and the South Carolina Forestry Commission.**

The United States Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, and marital or familial status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, DC 20250, or call 1-800-245-6340 (voice) or (202) 720-1127 (TDD). USDA is an equal employment opportunity employer. To file a complaint of discrimination write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.